PHILOSOPHICAL TRANSACTIONS.

I. *An Obſervation of the Variation of Light in the Star* Algol. *In a Letter from Sir* Henry C. Englefield, *Bart. F. R. S. and S. A. to* Joſeph Planta, *Eſq. Sec. R. S.*

Read November 6, 1783.

SIR, July 3, 1783.

HAVING been fortunate enough, from the fineneſs of the laſt night, to make a ſatisfactory obſervation of the variation of Algol, I loſe no time in communicating it to the Society.

The laſt viſible period was June the 10th, when Mr. AUBERT, as well as myſelf, obſerved it, though imperfectly,

and thought the time of its greateſt diminution was about 2½ h. in the morning; calculating from thence by Mr. GOODRICKE's period of 2 d. 20 h. 48′, the time of leaſt brightneſs was to be about one o'clock this morning.

All the following obſervations were made with an excellent night-glaſs, magnifying about eight times, with a field of 5°, in which therefore Algol and the ρ were diſtinctly viſible at once.

I firſt looked out at midnight, and readily found the ſtar, though hardly viſible to the naked eye from the vapours near the horizon. It appeared much bigger than the ρ, and full as big again as the π, alſo in the field at the ſame time.

At 12½ h. I looked again, and ſaw but little difference, as Algol was then alſo evidently much brighter than ρ. I at that time faintly perceived it with with the naked eye.

At 1 h. 10′ the ſtar was but very little bigger than ρ, the diminution having gone on moſt rapidly in the interval between the two laſt obſervations. Though higher above the horizon it was much leſs (if at all) viſible to the naked eye.

At 1 h. 35′ it was, I think, diminiſhed (though but little) ſince the former obſervation. It was ſtill, however, a very little larger than ρ, but not at all viſible to the naked eye.

At 2 h. it was ſcarce at all altered from the laſt obſervation; but, if any thing, ſeemed recovering its light.

I had meant to obſerve its progreſs ſtill further; but returning to the glaſs at half an hour after two, clouds had ſuddenly covered the whole ſky.

The fact of the diminution of Algol is, however, fully confirmed (if confirmation was wanting) by this obſervation, and the accuracy of the period fixed by Mr. GOODRICKE aſcertained,

tained, as the phænomenon was certainly within half an hour of the time fixed by Mr. GOODRICKE, which, divided on eight periods, gives only an error of four minutes on the length of it; and a nearer coincidence is not to be expected in a matter of this nature, where eſtimation is the only means of determining the brightneſs, and two perſons can hardly agree within a few minutes, from the difference of ſight.

I am, &c.